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An Armchair View of 2034

Around the turn of the century, an aggressive U.S. newspaper chain wired an eminent astronomer: IS THERE LIFE ON MARS NEED COMPREHENSIVE ARTICLE STOP WIRE THOUSAND WORDS COLLECT.

The next day the astronomer wired his reply: the phrase NOBODY KNOWS, repeated 500 times.

In respect to one important question, the population field is almost in the same fix as that astronomer. That question, however, is nothing less than: Is the interaction between population growth and nondemographic social and economic factors going to result in success or disaster, ultimately, during the next 50 years? There are encouraging trends, sobering problems, and much speculation, but at the moment, the bottom line is that nobody yet knows.

In the new *Population Bulletin* for February, "Planet Earth 1984-2034: A Demographic Vision," PRB demographer Leon F. Bouvier is inspired by 1984 as the year of both George Orwell's futuristic novel and another international population conference to take an educated look at the world's population possibilities during the next 50 years. A departure from PRB's usual publications, the Bulletin reflects the views and vision of one demographer, rather than relying primarily on standard demographic techniques and data sources.

Bouvier notes that as of the present Orwellian year, world population is approaching 5 billion, growing at 1.8 percent a year, and divided into a minority (25 percent) in developed nations, most with fertility below the replacement level of 2.1 births per woman; and a majority (75 percent) in less developed nations, which despite falling fertility are still experiencing rapid population growth due to earlier, rapid mortality decline. Also important in the world population picture is massive migration from rural to urban areas in less developed countries and across international boundaries from poor to better-off nations.

Now—what will happen during the next 50 years? A few suppositions about crucial nondemographic trends are in order. Bouvier assumes no world war in the next half century, nuclear or otherwise; global resource adequacy; continuing technological progress; and—with military expenditures eventually reduced—greatly increased economic aid from advanced to less advanced nations.

If (a big if) those conditions prove to be the case, Bouvier envisions the projected world of 2034 to be quite different, populationwise and otherwise, from today's. India, with 1.3 billion people and still growing, has bumped China, with population stabilized at 1.2 billion, to second place. Only 7 percent of the globe's inhabitants live in what are now called developed nations. Bouvier puts the global total at some 8 billion—doubled from just 58 years earlier. This will have happened, he projects, even though fertility has dropped close to replacement level in most less developed nations and the growth rate has dropped to just over 0.8 percent. This rate still means an increase of about 67 million people a year (compared to about 83 million in 1984). Nevertheless, for the LDCs to have brought fertility down so far was still a major undertaking, Bouvier says.

More remarkable (for observers in 1984) than the world's population size in 2034 is Bouvier's view of its composition. He sees the world's countries evolved into four types of societies:

1. **Service/information societies** (4 percent of the world's population). This group includes most of Europe (except for the USSR), the US, Canada, Australia, New Zealand, and Japan. These societies are

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German Government Expresses Concern On Population

In what may be a landmark event, considering the West German government's usual reticence conerning the country's declining population, a ministerial report to the Cabinet has now addressed the issue.

Serious economic and social consequences are seen if the country's very low fertility continues. At present, women in Germany average 1.4 children each and a continuation of this historically low fertility would cause the native German population to decrease from about 57 million today to 38 million in less than 50 years, with continued decrease after that.

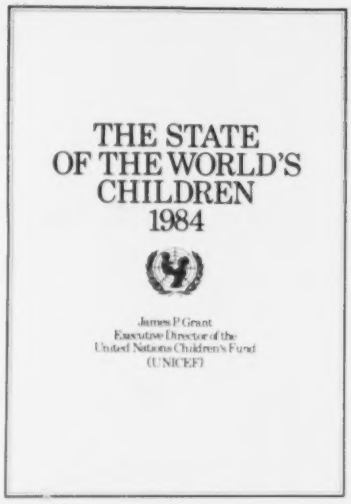
The report expressed concern over shortages in the labor force, a lack of recruits for the armed forces, high unemployment in the teaching professions, among others. An additional concern is the presence of 4.5 million "guestworkers," many of Turkish and Southern European origin who will increase their share of the population with a higher birth rate with possible ethnic tensions arising in a country which does not normally see itself as a "melting pot."

The attention of the Kohl government to the issue is notable, given the sensitivity of population subjects as a holdover from National Socialism. POPULATION TODAY will report more fully on the subject when a copy of the ministers' report is received. □

1984 State of the World's Children Report

In its 1984 report, *The State of the World's Children*, UNICEF calls children the real "wealth of nations" and points out that affordable means exist to alleviate many childhood diseases which are now uncommon in the industrialized world.

The report states that a "child survival revolution" is definitely possible via several "cutting edge" techniques often referred to as GOBI-FFF—standing for Growth monitoring, Oral rehydration therapy, Breastfeeding,



and Immigration, plus the more difficult elements of Family spacing, Food supplements, and Female education.

UNICEF points out that earlier reductions in infant and child mortality in developing countries were often caused by interventions such as insecticides, immunizations and epidemic control, antimalarial campaigns, and control of famines. These efforts, however, will ultimately be limited in their effectiveness and additional medical services required for continued mortality decline often prove too expensive for individuals in the poorer nations.

The report points to successes and failures such as the virtual elimination of polio in Brazil since 1980 and the failure of an ORT program in the Menoufia governorate of Egypt due to inadequate education of mothers.

For further information contact the U.S. Committee for UNICEF, 331 E. 38th St., New York, NY 10016. □

New IPPF Head Named

The International Planned Parenthood Federation has a new Secretary-General. Bradman Weerakoon, of Sri Lanka, has been appointed to the post, effective April 1, 1984. Weerakoon previously served as principal Adviser to Sri Lanka's Prime Minister, and has also worked in that country's social and economic development, international assistance, and in the national family planning movement.

Weerakoon succeeds Dr. Carl Wahren, whose six-year term of office expired at the end of 1983. IPPF is the umbrella organization for national family planning organizations around the world.

SURVEY REPORT

Cameroon WFS

The United Republic of Cameroon, sometimes called the "hinge" of Africa, lies to the east of Nigeria and has about a 200 mile coastline on the Gulf of Guinea. About three-fourths the size of Texas, the country is home to a population just over 9 million, growing at about 2.7 percent per year.

The country ranges from tropical rain forests on the coast to the semiarid plains near Lake Chad. Cameroon's economy has been aided by some oil production, begun in 1978, and a diversity of agricultural products available for export such as coffee, timber, cocoa, rubber, cotton, and palm oil. Although Cameroon has a modest trade deficit, foreign aid from France and the encouragement of outside investment should gradually help the economy. Some development efforts have, however, been hampered by inadequate roads and the inaccessibility of parts of the country during the rainy season.

The National Fertility Survey of Cameroon was taken in 1978 as a part of the World Fertility Survey and the results have recently been released. In all, three separate questionnaires were used in this comprehensive survey: one which asked questions about the geographic region the family lived in (transport, health conditions, etc.); a second, household *(menage)* questionnaire; and the third, the individual schedule for women 15-54, which emphasized fertility.

Results from the individual survey

Continued on next page

FROM THE EDITOR'S DESK

Last month's premier issue of POPULATION TODAY contained a variety of regular and occasional features—Demographer's Page (old), Current Readings (old), Spotlight (new), Take a Number (new). It also contained a department (not a regular one, we hope) shared with most publications in the world—"Correction."

The correction was a repeated table line in the Sept.-Oct. INTERCOM—a regrettable error found by staff after the issue had gone to press (and later pointed out to us by several readers). Other kinds of errors possible on any publication include problems of fact, interpretation and nuance, style inconsistencies, and the ever-dreaded trnaspoistoin.

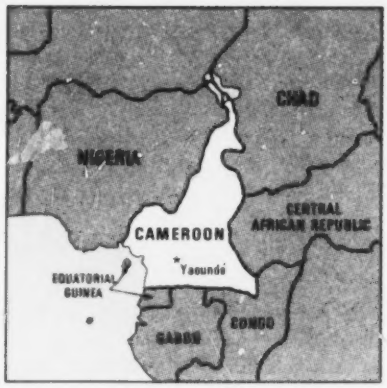
At PRB we proof the text of POPULATION TODAY with care at several stages during production. Tables are checked by two proofreaders, one reading aloud to the other—a dull but necessary method widely used in the publishing industry.

And yet. Like the B-52 bomber in the movie *Dr. Strangelove,* a typo will sometimes heroically fly past all defenses. (A major news magazine recently had to reprint its entire cover run because of a misspelled word.) The question is, how to cope with it.

You can ignore it—as did a prestigious European biological journal, caught in the middle of an academic scandal involving faked research which it had trustingly published. Sorry, a spokesperson for the august journal explained. We simply do *not* run errata.

But taking one's lumps and publishing a correction is undoubtedly a more realistic approach. The U.S. Census Bureau publishes high-quality data by the ream; it also publishes corrections, and no one thinks the worse of the bureau. Seeing an occasional erratum, in fact, can be reassuring. It means that somebody is looking out for you, and if the errata appear rarely enough, you can feel free to place some trust in the numbers (and words) you're reading.

—Art Haupt



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indicate a high level of fertility in Cameroon, despite evidence of moderately high sterility. A total fertility rate (TFR) of 6.5 lifetime births per woman can be calculated, a figure which agrees fairly well with an adjusted TFR of 6.0 from the 1976 Census. Women in Cameroon marry early and a median age of marriage of about 17 has changed little over the years. Only about 1 percent of the women in the survey remained unmarried by age 35-39.

The level of sterility in the country can be inferred by the percent of women who had no living children in the older age groups. About 15 percent of those 45-49 had no children, but the accuracy of this figure as an estimate of sterility is in doubt due to data reliability.

The survey respondents also indicated a preference for large families, with those aged 15-19 giving 8.1 children as the number they wanted; women who had 4 living children said that they wanted about 6 more. This wish for many children is coupled with low levels of contraceptive use. Although nearly 30 percent said that they had heard of a modern method, only about 3 percent had ever used one. Periodic abstinence was the most frequently used method by far. Use of family planning varied greatly by several basic socioeconomic categories. While only 9 percent of rural women had ever used a method, 31 percent of those in the cities of Yaounde and Douala had. Similarly, as educational levels increased, contraceptive use went up, from 3 percent for women with no schooling (about two-thirds) to 54 percent for those with secondary or higher education.

The household survey also measured infant mortaltity and derived an estimate of 113 infant deaths per 1,000 live births.

The government of Cameroon has recently changed its position on the rate of population growth and now considers it too high, but has not as yet adopted a full program. Population projections prepared by the World Bank indicate that the population would rise to over 30 million, if fertility declined to the "replacement level" of 2 children per woman by the middle of the 21st century. Thus, Cameroon appears to have a good deal of population growth in its future. □

Copies of the WFS Country Reports may be obtained from the World Fertility Survey, 428 Prinses Beatrixlaan 2770 AZ Voorburg, Netherlands.

Global Resource Assessment Published

The Worldwatch Institute's first annual assessment of global resource availability and its influence has just been published.

On the pessimistic side, the 250-page report *State of the World— 1984* cites dwindling oil supplies and their effect on world oil prices. But a more serious long-term threat may be worldwide soil erosion which has now reached "epidemic proportions," with dire consequences for food prices.

More optimistically, says study director Lester R. Brown, "Each threat to sustained economic progress has been successfully addressed by at least a few countries," with impressive gains in reducing global dependence on oil. "The issue," he says, "is not technology or resources, but awareness and political will. Only the strengthening of the latter can lead to the formulation of national population and economic policies that will put the world on a sustainable development path, one that will restore a broad-based improvement in the human condition." □

State of the World—1984 (Norton) is available in hardcover at a discount to PRB members. Send $8.00 to PRB, P.O. Box 35012, Washington, DC 20013. The price to non-members is $15.95. (PRB assists Worldwatch Institute in the distribution of its publications.)

BEST AVAILABLE COPY

Vatican On Misuse Of Statistics

Laying down guidelines for sex education, the Vatican's Congregation for Catholic Education last December issued a document "Educational Guidance in Human Love."

The document reaffirmed the church's teachings on sexuality as a fundamental component of personality and of communication, and of expression of love.

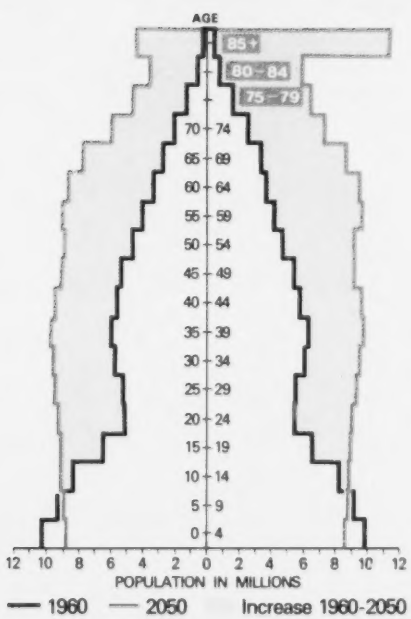
Paragraph 65 of the document, however, deserves some amplification for demographers, because it notes: "It is the task of the state to safeguard its citizens against injustices and moral disorders such as the abuse of minors and every form of sexual violence, degrading dress, permissiveness and pornography, and the improper use of demographic information."

While seeming to lump demographic analysis with more tawdry practices, the purpose of this paragraph is more plain. The 1980 Synod of Bishops on the Family had decried "improper" use of demographic statistics to cause "hysteria" or other emotional reactions of despair. This new warning against employing "improper" demographics was based on the same concern, and—like the 1980 statement—was aimed square at governments. "Misuse" of demographics wound up on the list not because it's like pornography but because preventing it is, according to the guidelines, a government responsibility. □

Census Bureau Data Soon In Diskette Form

The Census Bureau has announced that Bureau data will soon be available on floppy disks for microcomputers. Plans now call for the release of data from the from the forthcoming *County and City Data Book* and *1981 County Business Patterns*. The disks will be produced to run on the IBM PC or other PC-compatible computers. For further details, consult future issues of the Bureau's *Data User News* or call the Data User Services Division at (301) 763-4100. □

SPEAKING GRAPHICALLY . . .



Note. Data from the 1960 Census and most recent "middle series" projections of U.S. population as given in U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 922. The middle series assumes that U.S. fertility will stabilize at about 1.9 children per woman and that net immigration will be constant at 450,000 annually.

The two overlapping "population pyramids" to the left give a vivid picture of the changes in U.S. population size and composition projected to the year 2050. Since both pyramids are drawn to the same scale in terms of numbers, they give a comparable picture of overall size in both years.

In 1960, as the "baby boom" began to wane, U.S. population was 179 million and the pyramid had a wide base as a result of prior years' high fertility. By 2050, continued low fertility should cause the pyramid to take on a relatively uniform appearance. While the dramatic growth in the older population is evident, it should also be noted that the *numbers* of persons in the younger age groups will also increase, although their *proportions* would decline.

NEW FROM PRB

State Demographics for Marketing: A Data Summary. This 18½ by 24 inch wallchart gives the U.S. population and other demographic information by state, and then breaks down each state's population by age group—0-4 years; 5-14; 15-24; 25-34; 35-49; and 50+—and does so for both 1980 and (as projected) for 1990.

The aging of the Baby Boom is one of the U.S.'s most significant population trends. With this wallchart, marketing specialists can gauge the size of their age-specific market both now and in the future.

Population Change, Resources, and the Environment. This 16-page booklet gives a summary of the issues discussed at a conference held at the Johnson Foundation Wingspread Conference Center in Racine, Wis., in March 1983. At this meeting, which was sponsored by PRB, participants discussed how the world's population can live in balance with the resources it uses and the environment it inhabits and shapes.

This booklet, which is the fourth in a series of occasional papers *Population Trends and Public Policy*, is available from PRB as noted below.

Copies of *State Demographics for Marketing: A Data Summary* are $5 each. Copies of *Population Change, Resources, and the Environment* are $3.00 per single copy; 2-10 copies, $2.30; 11-50 copies, $1.90 each; 51 or more, $1.50 each. Orders of $20 and under must be prepaid and include $1.00 postage and handling.

Send order with remittance to PRB, Circulation Dept., PO Box 35012, Washington, D.C. 20013 (checks payable to PRB).

DEMOGRAPHER'S

In (Cautious) Defense of the Crude Birth Rate

by Mary Mederios Kent and Carl Haub

In order to present a picture of a country's population growth (or decline) we use measures which allow us to describe the demographic situation as best we can. Of the many rates and ratios adopted by demographers to describe the components of population change, the **crude birth rate (CBR)** and **crude death rate (CDR)** are among those most frequently used. But, the very fact that they are called "crude" should provide some hint they may not be the most highly regarded.

Both rates represent a simple concept: the number of births or deaths which occur in a given year per 1,000 population. They can also be used to calculate another fundamental measure, the rate of *natural increase*. Thus, if a country has a CBR of 44 births per 1,000 population and a CDR of 20 deaths per 1,000, it is then growing annually at a rate of 24 per 1,000 (or 2.4 percent) since births exceed deaths by 24 per 1,000. Every demography student learns that that's about all these crude rates are good for, that they are in fact poor indicators of fertility and mortality in a population. Why?

Both the CBR and CDR are affected by a country's *age structure*, that is, the proportion of a population in each age group. Sweden, for example, has a life expectancy of about 75 years, while Mexico's is about 66. But, Sweden's CDR is about 11 deaths per 1,000 population, while Mexico's is but 6. This apparently backward state of affairs is simply due to the fact that Mexico's population has a younger age structure than does Sweden's. Thus, while 44 percent of Mexico's population is below 15 years of age, only 19 percent of Sweden's is. And, only 4 percent of the Mexicans are aged 65 or over, compared to 17 percent of the Swedes.

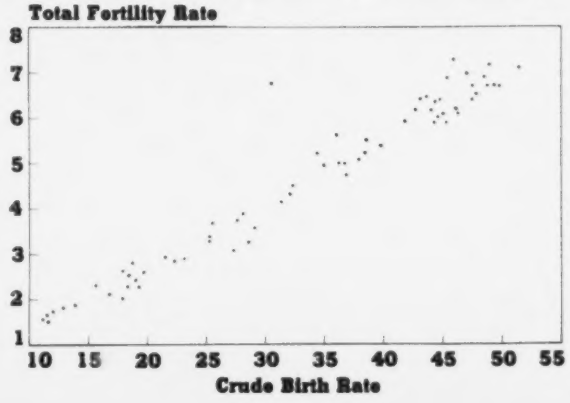
If we were to compare the mortality rates in Mexico at every age with those of Sweden, we would find that Mexican mortality is significantly higher. This is most dramatically illustrated by the infant mortality rates of the two countries. In Mexico, about 55 out of 1,000 infants die before their first birthday, while in Sweden only about 7 do. And in Sweden, the average length of life is about 10 years longer than in Mexico. It seems clear that the crude death rate is a very poor indicator of mortality and health conditions and can in fact lead to the wrong conclusion about the average life expectancy in different countries.

What about the crude birth rate? In thinking about crude rates, one is struck by the examples always given to point to the flaws inherent in these rates. The example is always the crude *death* rate, and follows along the line of Mexico/Sweden above. In perusing a table of country-level data, such as the *World Population Data Sheet*, it is difficult not to notice that high fertility countries have high CBRs, medium fertility countries have medium CBRs, and so on. The scatterplot in Figure 1 (see below) suggests a fairly strong relationship between two measures of fertility, the CBR and the total fertility rate (TFR). The TFR is a measure, not affected by age structure, which represents the average number of children each woman in a population would have at the rates of any given year.

In Figure 1, the CBR rises rather steadily with the TFR. The rates were taken from the most recent set of country population projections of the United Nations Population Division on a random sample basis. In reviewing both the graph and the UN *Assessment* itself, it is readily apparent that the crude birth rate does provide a good indication of the average number of children a woman will bear. The TFR is, of course, a more refined measure, and it is much more sensitive to change in fertility than is the CBR. But the computation of the TFR requires detailed statistics on birth by age of mother and the number of women in each age group—data that are often not available for less developed countries.

The CBR can give a reasonable estimate of fertility because, while the age composition of countries can vary substantially, the proportion of women in the childbearing years (15-49) varies much less, and it is these women who produce all the births in a population. Continuing with the example of Mexico and Sweden with their very different age structures, we find that women aged 15-49 comprised 23 percent of the total population of both countries in

Figure 1. Crude Birth Rate by Total Fertility Rate, 1980



Source: Countries selected by systematic random sample from United Nations Population Division, *Demographic Indicators of Countries: Estimates and Projections as Assessed in 1980*, United Nations, New York, 1982, ST/ESA/SER.A/82. Data from medium variant projections.

PAGE

Mary Kent and Carl Haub are demographers at the PRB

1980, according to the UN *Assessment*. Thus, in both countries, these women constitute 23 percent of the denominator of the CBR while they are "responsible for" 100 percent of the numerator. The ages of the remaining 77 percent of the population are insignificant. It is the number of births per woman which ultimately determines the average family size measured by the TFR and which also determines the proportion of births to the total population, measured by the CBR. As long as the percentage of women of reproductive age is similar among countries, usually about one-fourth of the total population, the CBR should have this same association with the TFR.

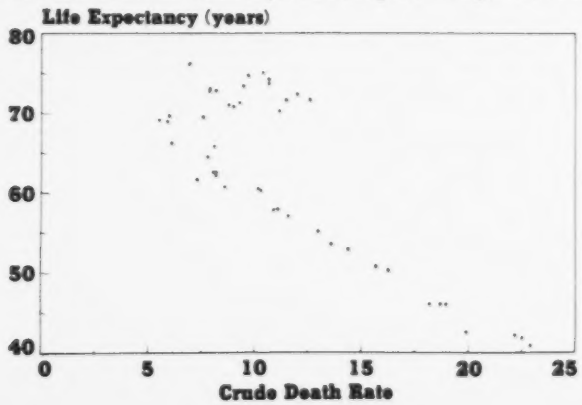
At least two factors contribute to the lack of an *exact* relationship between the CBR and TFR. While the proportion of women 15 to 49 in the total population is often relatively constant, the age structure within the 15-49 group may not be. Thus in Sweden, women in the most fertile years, ages 20-29, account for 29 percent of the 15-49 group, while they are 37 percent in Mexico. Thus, the more fertile group tends to have more statistical "weight" in Mexico than it does in Sweden.

Adding to the problems that the CBR will have as an indicator of true fertility levels is the fact that women 15-49 may not always be a constant proportion in all countries, particularly in countries heavily affected by migration. And, the age pattern of childbearing varies among countries, generally peaking at younger ages in less developed countries compared to more developed countries. Again, however, as we look at the scatterplot in Figure 1, there is a definite range for the TFR suggested by a given value of the CBR.

Not so for the CDR. Figure 2 plots life expectancy against the CDR and shows considerably wider variation. With a CDR in the range of 9 or 10, life expectancy can vary from about 60 to as high as 75. Only in countries with very low life expectancy—in the 40 to 50 range—does a pattern develop. These countries, many of which are in Africa, do have high CDRs, in part produced by high infant mortality rates. Infant mortality rates are so high in some of these countries that infant deaths can account for one third or more of all deaths annually.

Thus the CBR, upon closer inspection, does have some real utility in helping to fix the level of a country's fertility, unlike the CDR which cannot be used to approximate life expectancy. This is not to suggest that the more refined measures, such as the TFR, which standardizes our country fertility comparisons for age, should be forgotten. But it is useful to know where the value of the other rates we use begins and ends and, in so doing, we can learn more about how populations grow and change. □

Figure 2. Crude Death Rate by Life Expectancy, 1980



Armchair View

From page 2

characterized by extremely high productivity (thanks to "steel-collar" and "thinking" robots), a concentration of the human workforce in "knowledge-intensive" nonmanufacturing areas; and extremely low fertility (1.4 to 1.7 total births per woman, on average, Bouvier speculates). Some such societies have median ages of 45 or even 50 (the U.S.'s is presently 31, and face population decline.

During the previous half century, Bouvier sees the U.S. as having experienced enormous demographic changes. Because of continuing immigration and differential fertility, approximately half the population is black, Hispanic, or Asian. Other countries in this group have also taken the route of permitting immigration to counterbalance their trends toward aging and population decline.

2. **The New Industrialized Nations** (38 percent). When the more developed countries shifted into service/information societies, the role of manufacturing massive quantities of industrial goods fell to those less developed countries that were already on the verge of industrialization. Some of these, Bouvier says, were faced with high population growth, but thanks to a relatively literate potential workforce and a strong desire to reduce fertility, they were able to take off industrially. In 2034 the industrialized nations include China, Korea, and Malaysia, Argentina, Brazil, Chile, Costa Rica, Mexico, and Venezuela, a few Eastern European countries, and the USSR (which, while still a major power, has not made the jump to service/information). These countries' populations are still growing, but "at an ever lower rate."

3. **The Developing Countries** (43 percent). This largest proportion of world population consists of countries that remain somewhat more rural than urban, though their cities

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are growing and three-quarters of adults are now literate, Bouvier says. They include such countries as India, Indonesia, Nigeria, and Egypt. High population growth has hampered economic development and employment until recently. But now fertility has dropped to "within sight of replacement level," and more and more assembly-line type manufacturing is being transferred from the industrialized nations.

4. Least Developed Nations (15 percent). For a significant number of the world's countries, the situation in 2034 may be no brighter than in 1984. The populations of Bangladesh (projected to be 220 million with nearly 4 births per woman), most of sub-Saharan Africa, some Middle Eastern countries, and isolated other cases remain rural, increasingly crowded, and still growing rapidly well into the 21st century. Massive international assistance is still needed here.

While the world's population in 2034 is over 8 billion, it has not stopped growing, according to Bouvier's picture. Only the 4 percent in service/information societies is at zero growth; the rest is still growing, albeit less than half as rapidly as during the 1980s. Reaching a stationary world population of about 10 to 12 billion seems possible by the late 21st century (incidentally in line with the 1982 UN median variant projection, which shows population stabilization occurring worldwide in the year 2095, at 10.2 billion people).

Regarding his novel, *Nineteen Eighty-Four,* George Orwell stated: "I do not believe that the kind of society I describe necessarily will arrive, but I believe...that something resembling it could arrive." Demographer Bouvier sees his scenario of the next 50 years as "a generally optimistic" one, one which assumes that human beings in their own self-interest maintain the peace and allow all to share in the fruits of scientific progess. Things could, he points out, turn out far differently; for example, population growth could continue at higher rates than projected, leading, he says, to still more widespread migration and in turn, increased risk of devastating warfare. But he refuses to follow such possibilities too far. "We simply cannot make such predictions. We must remain optimistic and hope."

Leon F. Bouvier is Senior Research Associate at PRB. He has served as staff demographer to two population-related commissions of the U.S. government; the Select Committee on Population and the Select Commission on Immigration and Refugee Policy. He is the author of many articles in professional journals and several books, including (with Robert Weller) the textbook *Population: Demography and Policy.* He holds a PhD in sociology from Brown University. □

Additional copies of the 39-page *Population Bulletin,* "Planet Earth 1984-2034: A Demographic Vision," (Vol. 39, No. 1) can be ordered from PRB for $4.00 each; 2-10 copies $3.00 each; 11-50 copies, $2.50 each; 51 or more copies, $2.00 each. Handling charges: Inside the U.S., add $1.00 for each order; outside the U.S., add 25 percent to the cost of Bulletins.

1980 State Fertility Rates

Birth data for states indicate that large differences among the 50 states and the District of Columbia continue. In 1980, fertility in the state with the highest total fertility rate (TFR), Utah, was more than twice that of the lowest, Massachusetts.

The accompanying table gives the TFR for each state as reported by the National Center for Health Statistics. The TFR is the average number of children which a woman would have in her lifetime at today's rate. Following NCHS custom, rates in the table are given per 1,000 women.

The TFR for the country as a whole is 1,840, while it is 1,750 for the white population and 2,222 for the black population. The District of Columbia is not ranked in the table since it is a city (although a state equivalent for statistical purposes), but one statistic is worth noting. The TFR for the white population of the District is 755, a remarkably low figure which is undoubtedly explained by the large proportion of single women in the capital city. □

States Ranked by Total Fertility Rates, 1980

State	TFR per 1,000 women
1. Utah	3,223
2. Idaho	2,519
3. Wyoming	2,424
4. South Dakota	2,353
5. Alaska	2,345
6. New Mexico	2,247
7. Mississippi	2,218
8. Louisiana	2,159
9. Texas	2,143
10. Arizona	2,134
11. North Dakota	2,133
12. Hawaii	2,095
13. Montana	2,067
14. Nebraska	2,046
15. Oklahoma	2,022
16. Kansas	2,018
17. Arkansas	1,989
18. Iowa	1,957
19. Illinois	1,926
20. Missouri	1,909
21. California	1,904
22. Minnesota	1,891
23. Alabama	1,888
24. Kentucky	1,875
25. Georgia	1,869
26. Wisconsin	1,853
27. Nevada	1,850
28. South Carolina	1,841
29. Indiana	1,840
UNITED STATES	*1,840*
30. Oregon	1,835
(tie) Washington	1,835
32. Ohio	1,810
33. West Virginia	1,805
34. Colorado	1,782
35. Michigan	1,766
36. Delaware	1,759
37. Florida	1,743
38. Maine	1,736
39. Tennessee	1,728
40. Vermont	1,719
41. New Hampshire	1,695
42. Pennsylvania	1,635
43. Virginia	1,631
44. New York	1,628
45. North Carolina	1,627
46. New Jersey	1,617
47. Maryland	1,579
48. Rhode Island	1,521
49. Connecticut	1,508
50. Massachusetts	1,453

Source: Provided by the Division of Vital Statistics, the National Center for Health Statistics

WORLD FOOD NEWS

Women Also Produce (and Need) Food

The role of rural women in the Third World food production appears to have been underrated, according to a new FAO study. The study, to determine food energy requirements of rural population, showed that women and girls perform 60 percent more work than men and boys and provide 60 percent of the household food. Paul Lunven, director of FAO's Food and Nutrition Division, said the findings of the three-country study appear to be valid for the majority of poor countries.

Since women's energy requirements now appear greater than nutritionists originally thought, Lunven said, "I do not think it would be incorrect to say that of the 450 million people in the world who are in immediate danger of serious malnutrition, women and children from the most impoverished groups are in a majority. Unfortunately. . . women are statistically 'invisible' and it is impossible today to assess, even approximately, the full extent of malnutrition amongst them."

FAO photo by P. Pitet

Women tilling the fields in Madagascar.

"All too often," Dr. Nural Islam, Assistant Director-General of FAO's Economic and Social Policy Department, commented, "it has been assumed that women's agricultural activities are relatively unimportant, and that they are adequately reached through a male household head. Direct assistance to women as producers is needed, particularly in situations where men and women are responsible for different aspects of agriculture, where women work together in production groups, or where they are heads of households, now estimated to be the case in 30 percent of rural households in the Third World."

A recent FAO meeting on the study agreed that foodcrop related development projects should, in many countries, be primarily directed at women. Among the recommended priorities for policy and action were programs and projects to further food security at the household level. A comprehensive farming system approach was urged to reflect women's activities and needs in their multiple roles within their family, household, and farm. □

World Food News is prepared by the North American Liaison Office of the Food and Agriculture Organization of the United Nations.

Population Update

Estimated United States Population:

As of November 1, 1983	235,059,000
As of November 1, 1982	232,903,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, Population Division.

Estimated World Population:

As of February 1984	4,732,000,000
Annual Growth	83,000,000

Estimated by extrapolation of the mid-1983 world population given on the 1983 *World Population Data Sheet.*

Latest Provisional Statistics for the U.S.: September 1983

Item	12 months ending with September: Number 1983	Number 1982	Rate 1983	Rate 1982	Rate 1981	Rate 1980
Live births	3,679,000	3,680,000	15.8	15.9	15.9	15.8
Deaths	2,013,000	1,976,000	8.6	8.6	8.7	8.7
Natural increase	1,666,000	1,704,000	7.2	7.3	7.2	7.1
Marriages	2,465,000	2,477,000	10.6	10.7	10.6	10.6
Divorces	1,177,000	1,197,000	5.0	5.2	5.3	5.2
Infant deaths	40,000	41,900	10.9	11.4	11.9	12.7
Population base (in millions)	...	...	232.2	231.0	228.8	226.5

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births. Rates are based on revised population estimates from the 1980 Census.

Source. Monthly Vital Statistics Report (Vol. 32, No. 9) from the National Center for Health Statistics.

LETTERS TO THE EDITOR

To the Editor:

I have just read your article, "Nigeria," in the September/October 1983 issue of INTERCOM. I am particularly interested in Nigeria, in part because these days I travel to Nigeria periodically on population-related work sponsored by the U.S. Agency for International Development. As a matter of information I offer the following brief remarks.

1. I think it is misleading to state that "Nigeria is divided into three relatively autonomous regions" (second paragraph). That was in the "bad old days." The Constitution of 1979 provided for a federal system of government, modeled after the United States, with 19 states.

2. The next census is not seriously being contemplated for 1984. Prior to the military coup of Jan. 1, 1984, President Shagari had promised that a census would be conducted before September 1987. It is recognized in Nigeria that a census is not feasible before 1985 and probably not before 1986.

3. The preliminary World Fertility Survey Report which you discuss shows some interesting total fertility rates associated with educational levels. Based on estimates of current fertility, the implied TFR for women with no formal education is 4.95 births; it is 6.85 for women with primary or middle-level education. This is particularly significant since Nigeria has made a strong commitment to the achievement of universal primary (and even middle-school) education for both girls and boys.

4. Finally, the estimated total 1983 population of 84-85 million is not consistent with plausible/probable population growth rates since the pre-1973 censuses. This has even been conceded (finally!) by the Nigerian National Population Commission. While it is not possible to give a decent estimate, the total is more likely in the vicinity of 100 million.

These are in the "for whatever it's worth" category.

Sincerely,
James E. Kocher,
Director, Center for Development Policy, Research Triangle Institute, Research Triangle Park, North Carolina

TAKE A NUMBER...

Infant Mortality Declines: Infant mortality data reported in the October 1983 issue of *Population and Vital Statistics Report* reflect continuing decline in the very low rates of developed countries.

In 1982, Japan gained first place, with a low of 6.6 infant deaths per 1,000 population; Sweden, with 6.8, was second. (Finland's 1982 figures have yet to come in, but since the 1981 Finnish rate was 6.5, Finland might yet turn out the lowest.)

The Good Old Days? The early 1900s are often thought of as "the good old days," evoking images of ice cream parlors, 4th of July picnics, and a slower-paced life. But, perusing U.S. historical statistics reminds us of other less enviable aspects of life: the life expectancy at birth of white males was 47 in 1900 and, for males of black and other races, 33. It was only a little better for females, 49 for whites and 34 for other races. (In 1982, by contrast, white males had a life expectancy at birth of 71.4, all other males, 66.5; for white females, it was 78.7, for all other females, 75.2, according to provisional data from the National Center for Health Statistics.)

A Bite from the Apple: New York City's population loss in the 1970s was large, but until we took a closer look at the data we hadn't noticed that, from 1970 to 1980, New York lost more people than the entire 1980 population of Baltimore, the nation's tenth largest city.

Census results: The October 1983 issue of the U.N.'s *Population and Vital Statistics Report* contains the following census counts: Sweden, 8,320,438, as of the census day, Sept. 8, 1980; Malaysia, 13,700,000, as of June 10, 1980; and Finland, 4,784,710, as of Nov. 1, 1980.

Decreasing Farm Population: The 1982 estimate of the U.S. farm population was lower than 1981, decreasing from 2.6 percent of the total U.S. population to 2.4. Altogether, about 5.6 million persons lived on farms in 1982, according to the Census Bureau's Current Population Survey. Since 1978, a farm consists of a rural tract which has $1,000 or more in annual sales of agricultural products. The 1982 figure of 2.4 percent compares with a 1920 farm population of 30.2 percent, although the definition of a farm family was not exactly consistent in the two years.

addenda...

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 2213 M St., N.W., Washington, D.C. 20037

THE TARNISHED DOOR: The New Immigrants and the Transformation of America, by John Crewdson. New York: New York Times Books, 1983. 354 pages. $17.95. ISBN 0-8129-1042-7. LC 82-40367.

This highly readable narrative by Pulitizer prize-winning John Crewdson gives many insights into the day-to-day conduct of U.S. immigration policy, the reasons for the large numbers wishing to enter the U.S., and the struggle that the Immigration and Naturalization Service (INS) faces. The book is not intended as a scholarly research piece, rather as a series of observations resulting from three years of research on U.S. immigration.

Crewdson points out that about 2,600 Border Patrol agents (about 400 on duty at any one time) must process about one-quarter billion persons wishing to enter, somehow doing so while observing 5,000 pages of rules and regulations. And doing this in the harassed atmosphere of INS offices where lines often begin to form at 3 a.m. Crewdson argues that many illegal aliens indeed take jobs not wanted by Americans and often stay with them until caught and deported. Exploitation of illegals is common, with many working for much less than the minimum wage without complaint and in constant fear of apprehension.

This book provides many insights into U.S. immigration, providing background on this important issue which goes beyond the statistics.

—Carl Haub

DIVORCE AND REMARRIAGE: Problems, Adaptations, and Adjustments, by Stan L. Albrecht, Howard M. Bahr, and Kristen L. Goodman, Westport, Conn.: Greenwood Press, 1983. 211 pages. $29.95. ISBN 0-313-23616-X. LC 82-24250.

With an estimated one-half of American marriages ending in divorce, a great deal of attention has been paid to the problems of modern marriages, seeking to explain why they so often fail. This study reports the results of a 1976 survey of men and women in the Rocky Mountain states, that focused on the major causes of divorce, the actual decision to terminate the marriage, the adjustment problems after separation, divorce, and remarriage. The authors show the relative importance of practical factors such as financial independence of the wife and ease of divorce laws, compared to infidelity or personal unhappiness in the decision to end a marriage. But the study results also gain a larger perspective with an extensive review of the history of trends in divorce and popular theory as to causes. Life after divorce is also explored, revealing the different mechanisms used by men and women to create new social relationships, and the problems or successes of remarriage.

Because they place their findings within the broader context of the modern family, the authors succeed in producing a book which should appeal to a wide audience of lay and professional people interested in the problems of marriage and divorce.

—Mary M. Kent

THE NEW AMERICANS, by Brent Ashabranner. New York: Dodd, Mead, 1983. 212 pages. $13.95. ISBN 0-396-08140-1.

This book describes the changing patterns in U.S. immigration and discusses their importance now and in the years ahead. It offers primarily an in-depth look at today's immigrants, including refugees and illegal aliens. Telling their stories, often in their own words, it shows the reader their hopes, problems and contributions to their new country.

—Patricia Cancellier

SURVEYS, POLLS, CENSUSES, AND FORECASTS DIRECTORY. (1st ed.; 3 issues, of which the issue reviewed below is No. 1.) Detroit, Mich.: Gale Research Co., 1983. Paper. Subscription to the 3 issues, $175.00. ISBN 0-8103-1692-7.

This Directory aims to catalog the plethora of economic and social statistical reports produced in the U.S. (mostly by private concerns) with short, descriptive entries for surveys, polls, censuses, and forecasts. Published and unpublished information is mentioned, and the Directory provides addresses and phone numbers for contact.

Each issue will contain about 400 entries. If issue No. 1 (92 pages long) is any indication, the series includes few U.S. government surveys, and reads like a well-ordered collection of odds and ends (the General Mills American Family Report 1980-81; *Bus Facts*, published by the American Bus Association; etc.). Its utility to the reader will depend on the reader's need to know about famous or obscure statistical compilations.

—Arthur Haupt

PUBLICATIONS RECEIVED

THE ORIGINS OF THE ENGLISH NATION by H. Munro Chadwick. Washington, DC: The Cliveden Press, 1983. 233 pages.

THE LIFE TABLE AND ITS APPLICATIONS by Chin Long Chiang. Malabar, Fla.: Robert E. Kreiger Publishing, 1984. 316 pages.

ADVANCE REPORT OF FINAL NATALITY STATISTICS, 1981. Monthly Vital Statistics Report, Vol. 32, No. 9. Hyattsville, Md.: The National Center for Health Statistics.

THE MYTH OF MASCULINITY by Joseph H. Peck. Cambridge, Ma.: The MIT Press, 1982. 205 pages.

SOCIAL GERONTOLOGY by Michael B. Kleiman. Basel, Switzerland: Karger, 1983. 205 pages.

MODELLING ECONOMIC AND DEMOGRAPHIC DEVELOPMENT. Asian Population studies Series No. 54. New York: United Nations, 1983. 247 pages.

POPULATION EDUCATION PROGRAMME IN ASIA: What Research Says. Bangkok: UNESCO, 1983. 191 pages.

THE GHANA FERTILITY SURVEY, 1979-1980, A Summary of Findings. London: The World Fertility Survey, 1983. 16 pages.

THE ELDERLY POPULATION'S CHANGING SPATIAL DISTRIBUTION: Patterns of Change Since 1960 by Kevin F. McCarthy. Santa Monica, Ca.: Rand Corporation, 57 pages.

THE RACES OF BRITAIN by John Beddoe. Washington, DC: The Cliveden Press (reprint of the 1885 edition), 1983.

271 GUESTS IN THE DRAGON: Social Demography of a Chinese District, 1895-1946 by Burton Pasternak. New York: Columbia Univ. Press, 1983. 190 pages.

SPOTLIGHT

VIETNAM

Population, 1983: 57 million
Population per sq. mile: 448
Births per 1,000 pop. (est., 1983): 34
Deaths per 1,000 pop. (est., 1983): 10
Annual rate of population growth (1983): 2.2 percent
Area: 127,300 sq. miles (approx. equal to New Mexico)
Major exports, 1982: agricultural and handicraft products, coal, minerals, ores - $369 million
Major imports, 1982: petroleum, steel, railroad equip., chemicals, medicines, cotton, fertilizer, grain - $838 million

The Socialist Republic of Vietnam, which forms a narrow strip of land in Southeast Asia along the South China Sea, has begun a rebuilding process after decades of occupation and civil war. With 57 million people, Vietnam ranks as the world's 13th most populous country, having recently passed France, the U.K., and Italy. Much of the population is concentrated in the rice-producing areas of the coastal lowlands and the Mekong and Red River valleys. The rugged Annamite Mountains rise in the Central Highlands and much of the North consists of densely forested hills and mountains.

Since reunification, economic recovery has been difficult and, following the failure of the 1976-1980 Five Year Plan, the 1981-1985 Plan calls for increased food production and the attainment of self-sufficiency. Part of this policy is the reduction of the population growth rate.

Rice production, recovering from recent typhoon damage, remains a key to Vietnam's recovery.

Vietnam's labor force is about 70 percent agricultural, with women comprising about two-thirds of the farm work force. Most heavy industry is in the North and, although badly damaged in the war, has regained much of its capacity. Coal continues to be Vietnam's leading export, along with copper, tin, and phosphates. The country's extensive forests also provide great potential for the lumber industry and Vietnam has recently begun offshore oil production.

Nonetheless, recovery has been elusive. Foreign aid formerly supplied by the United States and China now comes from the Soviet Union, China, Eastern Europe, and France. In recent years, the foreign trade balance has improved, but there have also been some setbacks in food production, a situation aggravated by substantial rice crop damage from typhoons. Efforts to raise food production by encouraging private development of unused land have not been very successful, in part due to the continuing shortage of fertilizers, farm machinery, and insecticides. It is also likely that economic progress has been retarded by large military expenditures necessitated by the wars with Cambodia and China; Vietnam maintains the world's third largest army and must spend half of the government budget on defense.

One of the government's major efforts has been a large-scale population redistribution from urban areas to the less densely inhabited provinces. New Economic Zones have been set up in these areas with the hope that the new residents will become self-sufficient as soon as possible. The planned population movements for the late 1970s called for relocating from 4 to 5 million people. Some of these movements involved large numbers of people over long distances, such as the shift of 100,000 people from Ha Nam Ninh in the North to Minh Hai province in the extreme South. It is estimated that about 1.5 million people were actually moved from 1976-1980, but it is uncertain how much of this was due to direct government action or was spontaneous relocation with the cessation of hostilities.

Vietnam's other major migration stream was, of course, the flight of many residents. About 1.1 million emigrated from the country from 1975 to 1982; half of those were ethnic Chinese returning to China and, of the others, 142,000 "boat people" are thought to have been lost at sea.

As part of its national policy, the government has set a goal to reduce the rate of population growth to 1.5 percent by 1985 through the National Family Planning Programme. Officially reported crude birth rates (CBR) reflect a distinct decline in fertility, from about 40 births per 1,000 population in 1976 to about 29 in 1980. While there seems to be little doubt about the downward trend, the actual level may be understated due to the incomplete registration of births. The U.S. Bureau of the Census has estimated a CBR in 1983 of 34, down from 39 in 1975. If this estimate is correct, a rate of growth of about 2.2 percent is indicated for 1983 (including the effect of some continuing emigration). Thus, while Vietnam may not be exactly on target, and precise trends are difficult to measure, some decline in recent fertility seems certain.

Vietnam undoubtedly has considerable population growth in the future. An increase of about 50 percent from 1980 to 2000 seems likely and, assuming that fertility drops from the present 5 children per woman to 2 by 2010, the population could well be at the 130 million mark as growth slows by 2050. This increase in numbers will form one of Vietnam's challenges for the future. □